



**CB Radio AE 2980**

## Introduction

The ALBRECHT **CB- Radio AE 2980** has been produced according to the latest European Standards like EN 300 135 -2 und EN 300 433-2 and offers:

- **switchable country settings between 80 channels FM/ 12 channels AM or 40 channels FM / 40 channels AM**
- **Channel selection via UP-DOWN buttons**
- **Channel and Memo Scan up and down**
- **Dual Watch**
- **5 free programmable memo channels**
- **Multi-function illuminated LC Display**
- **Standard mic socket 2.5 mm**  
**allowed for all kind of mic's and data transmission accessories**
- **external speaker / earphone socket 3.5 mm**
- **slide- in battery compartment for 9 pcs Alkaline or NiMH batteries AA size**
- **DC- socket for 230 V wall charger and ext. DC power supply 12 Volt**
- **automatic battery save circuit**
- **large DC voltage range from 9 to 13.2 V**
- **switchable transmit power in FM (1 Watt / 4 Watt)**
- **slide connector for battery eliminator (12 V adapter) instead of battery pack (optional available)**
- **24 Volt DC operation possible via external adaptor cable (option)**
- **BNC socket for external base station, mobile- or plug-in antennas**
- **Free use in most European countries (see Radio Passport)**

Please read the user informations carefully, and respect the different regulations, channels and modulation modes in the different countries.

## **Accessories Supplied**

The AE 2980 comes with following accessories:

- Empty battery compartment for 9 pcs NiMH rechargeable batteries or heavy duty Alkaline batteries (AA)
- Plug in- antenna with BNC-connector
- Carrying strip
- User Manual

## **Optional Accessories (separate available)**

- Reserve- empty battery case (Nr. 10103)
- 12 V cable for operating the radio in cars 12 V (Nr. 7575)
- Mobile Adapter 12 V , can be placed instead of the battery pack (Nr. 10109)
- Adapter cable for 24 V DC use in trucks with cigarette lighter plug (Nr. 73750)
- Various magnetic and mobile mount antennas
- Plug-in Antenna CL27 + BNC (Nr. 6577) for larger communication range

## **Safety Hints**

The RF radiation of a CB hand held radio with plug in antenna and full power can have influences to pace makers and may be a matter of electro smog for sensitive people. If You should have a pace maker, please let Your doctor or manufacturer confirm that the immunity of the pace maker circuit is sufficient for CB radio. In case of problems, better use low power setting or an external antenna or keep the radio as far away from the body during transmit mode.

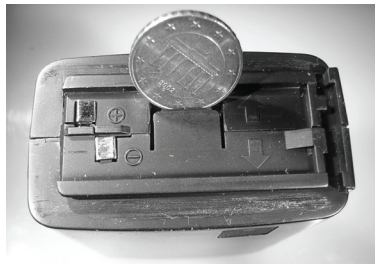
Never transmit without antenna and never touch persons with the antenna while you are transmitting.

When driving a car, please do not forget that traffic safety has priority against radio communications. In certain countries the driver is not allowed to use transceivers during driving. We recommend to use external car antennas wherever possible, because transmitting from inside a car may also have the risk to generate interference to the car electronics.

To achieve larger communication range from a car or truck, it is essential to have an external antenna.

### Insert Alkaline or NiMH Batteries

Before use, place 9 pcs of AA size Alkaline batteries or fully charged NiMH rechargeable batteries into the battery compartment. Unlock the battery case by pushing the lock on the left cabinet side to the top side of the radio. Push the battery case to the right side and remove it from the radio.



Use a thumb nail or a coin to open the top side as indicated here.



Place the 9 batteries according to the markings inside the battery case- take care for the correct + and – placement! Please do not use cheap and simple torch light batteries. Only heavy duty battery types as they are used in digital cameras can be used for hand held radios.

Rechargeable batteries can be charged inside the battery compartment **only via our spezial 230 V wall charger and not by any other DC cable or DC adaptor**

The charging time depends on the battery capacity and can take 14-18 hours for a full charge. During charging, the radio must remain switched off.

**Our recommendation:** Buy a complete set NiMH batteries together with a dedicated rapid charger- these sets are optimized to the large capacity rechargeable batteries and can charge the batteries in a few hours- faster than the standard wall charger for the battery compartment can do it.

### Use of DC cables (optional)

Our DC cables and adaptors are only designed for operating the radio in a car or truck. They cannot be used to recharge the batteries inserted in the battery compartments.

The DC cable connects to the DC socket on the side of the battery pack (inner contact + and outer contact -)

It is technically not possible to charge the radio with inserted NiMH batteries from 12 V DC. With engine off, no charge current is possible. With running engine, at 13.2 V, only a weak charging current is applied to the NiMH battery, which can only keep the charging status, but cannot recharge an empty battery completely. The technical circuit allows to connect the DC cable permanently to the radio, and Alkaline batteries are switched off as long as the DC cable plug is inserted.

**230 V Wall Charger:** Only this device can charge NiMH batteries in the battery compartment completely. It supplies a higher (but current limited) voltage of 15..16 V and is matched to the circuit. During charge procedure the radio must remain switched off.

Please make sure that You do not have Alkaline batteries inserted. Such batteries cannot be charged and there is even a risk of explosion or excessive heat if You should try to charge such batteries.

### Note to the DC fuse

A DC fuse for 2 A current is inserted inside the cigarette lighter plug of the DC cable. If this fuse should blow, please exchange only by a fuse of the same current range and try to find out the cause! Our repair experience shows that in most such cases the polarity of the cigarette lighter installation was wrong. Never repair a blown fuse by aluminium foil or similar material!

### Warnings

Never try to charge Alkaline batteries. Such batteries may explode, heat up, leak and can cause injuries. If You are using rechargeable batteries, check from time to time that the battery and battery holder contacts are clean and not corroded. Many NiMH batteries show corrosion or leakage after longer time periods. Take out the batteries from time to time, clean the contacts and check that they work. Cadmium containing batteries, like the former used NiCD batteries, are not any more allowed to sell because of their environment risks.

### Antenne connection

The supplied short plug in antenna allows only communications over short distances. Higher communication ranges in CB can only be obtained by longer antennas up to a quarterwave length (this is a physical law and on CB, a quarter wave is 2.75 m!). Any longer Antenna, mobile or base station antenna can extend the range of Your radio considerably.

It is allowed to connect other antennas to Your hand held radio. All You need is an antenna with BNC (for example Nr. 6577) connector or an adapter between the normally used PL plug and BNC.

## Notes to CB regulations in Europe

Your Albrecht AE 2980 is a CB radio according to European Standards EN 300 135-2 / EN 300 433-2. With EU regulations and bilateral agreements it is possible to use this radio (latest information January 2009) in following countries:

**80/12 setting** in D, CZ, SK

**40/40 setting** in B, BG, CH, D, E, EST, F, FL, FIN, GR, IRL, I, LV, NL, P, PL, RO

**Note:** in Austria only a specially limited version AE 2980 FM is allowed to be used.

**In other not mentioned countries the radio may not be used from the regulations.** But most countries except Austria accept the radio, as long as user does not transmit in AM. For visitors and travellers from other countries, use of this radio is free of charges everywhere. Only residents living in Belgium, Switzerland, Liechtenstein, Italy and Spain still must pay a certain fee for CB radio in their home countries.

Please find the CE conformity declaration at the end of this manual. Updates can be downloaded any time from [www.alan-albrecht.info](http://www.alan-albrecht.info)

## Operation- Knobs & Buttons



### Before first use:

- Set **SQ** (Squelch) to left counterclockwise position
- Set **VOL** (Volume, Power) in a medium position

The Power switch is combined with the Volume potentiometer. A click sound in counterclockwise position remembers that the radio is off.

Please adjust the desired volume after switching the radio on. The Display will show the icons for a short test.

At first use the radio will start with the 80 FM/ 12 AM country setting for Germany. This is as well valid for Czech and Slovak Republics. In Czechia only FM on 80 CH is allowed, while in Slovak Republic only FM channels 1-40 and 70-80 are allowed to be used.

### Channel selection

If everything is ok, the radio will first start on Channel 9 (in the display you see **09**).

With **UP** – and **DWN**- keys at the left side You can switch each of the 80 or 40 channels.

- **UP** - key will switch to higher channels
- **DWN**- key will switch to lower channels.
- keeping the keys pressed longer, the channels will change faster.  
(see display).

### Country Switching

Because of the variations of CB regulations in Europe, the German factory setting of the radio cannot be used everywhere. You can anytime switch to the international setting with 40 channels AM and FM, which is also allowed to be used in Germany.

#### 40 CH AM and 40 CH FM (international setting for all countries)

- Switch the radio **off**.
- Press **D-EU** and **PTT** together and keep pressed for at least 3 seconds.
- Switch the radio **on** again (with the other free hand) .
- Release all buttons.

#### 80 CH FM and 12 CH AM (CH 4-15) for D, CZ and SK

- Switch the radio **off**.
- Keep **PTT** pressed for at least 3 seconds.
- Switch the radio **on** again (with the other free hand).
- Release the button.

The settings remain stored as long as batteries will be in the battery pack. For changing empty batteries You will have some minutes time, before the setting will be lost.

Please use the German settings only in the above mentioned countries. Use of the channels 41-80 can disturb other services in countries, where the 80 channels are not allocated.

## S-Meter / Power

There is a bar graph display for the signal strength of the received signals. More bars = higher input signals. A strong signal with S 9 + 30 will show full deflection. The bar graph is used for Power meter as well. 4 Watt = full deflection, 1 Watt = 2 or 3 bars.

## Squelch Adjustment

Especially in FM the background noise will disturb on free channels. With the squelch control **SQ** you can suppress this noise by careful adjustment of the **SQ** potentiometer. You can also suppress weak signals or signals, which are far away and which You may not wish to receive.

SQ to left position: All signals can be heard

SQ turned more clockwise: Signals must be stronger to open the squelch

Best setting to highest sensitivity:

- Go to a free channel without any signal
- Turn **SQ** slowly and carefully so much to the clockwise position, that the background noise just disappears.

Now the speaker will suppress the disturbing background noise, but the radio is sensitive enough to open when any usable signal appears.

The correct SQ setting is very important for the SCAN function. The SQ threshold point decides about SCAN Stopp or SCAN restart

## Special frequently used channels

The CB community is using some channels for special purposes:

**Channel 9** Emergency and Calling Channel, in Germany „Trucker Channel“

**Channel 19** Trucker- Channel in some other countries

## MEMORY- Operation

The **MEMO** key allows toggle switching between 5 preselected memory channels and the standard channel selection.

- Press **MEMO** shortly and You will see the channel number and the memory location number of the selected MEMO channel (1-5).
- Use **UP/ DWN** to select between the memory locations 1 to 5.
- Short pressing **MEMO** will switch back to normal operation



Factory default setting:

- **Channel 1**
- **Channel 9 (international emergency and calling channel)**

Especially in Germany most truck drivers use this channel in AM for their communications. This means, that channel 9 is the only channel on CB, where many people are permanently listening. This can be very important in case of emergency.

Even if you intend to call a certain station, you can try to call on CH 9 first. If the called station answers, you can discuss with the other party to which working channel you will go. Then change the channel – and channel 9 is again free for other calls.

- **Kanal 19**  
Trucker-Channel in France, Spain and Italy
- **Kanal 4**
- **Kanal 40** (FM Calling channel in Switzerland)

### Programming your own MEMO Channels

Each of the 5 memory locations can be re-programmed to other channels.

- **Step 1** Select the desired channel and the modulation in normal mode
- **Step 2** Press **MEMO** about **2 seconds** until one of the memory location numbers will appear (1-5)
- **Step 3** Select the memory location number by **UP/DWN** (1 to 5)
- **Step 4** Press **MEMO** shortly to store the new channel
- **Step 5** Press one of the buttons **UP/DWN** to go back into normal operation

Your new channel is saved in memory as long as the power supply will not be interrupted for longer periods. Please note that memory settings will be lost when you change the country programming.

#### Note:

Even if the battery becomes discharged, there is still enough energy for the memory back-up. Replacing batteries will provide some minutes back-up power, so that the settings are not lost during normal battery replacement procedures.

The current consumption for the memory backup is very small and does not have any influence on the normal discharging of batteries over longer time periods.

### Channel SCAN

The AE 2980 has an automatic Scanning function, where all 40 (80) channels or your MEMO channels can be subsequently checked for activity.

First select between normal operation (channels) or MEMO mode.

Adjust the squelch SQ to the desired opening point (threshold)

### SCAN Start

- Press **SCAN** shortly.
- In the display **SCAN** will appear. The automatic search procedure will start after a short delay and checks all channels in rising sequence.
- If the circuit detects a signal on one of the channels, the scanner will stop there and you can listen for some seconds to the communication.
- If You do not do anything, the scanner will restart and resume the search procedure after about 5 seconds waiting.

### SCAN Stop

- You can any time stop the scanning process by pressing the **SCAN** -button or the **PTT** button.

### Change the scanning sequence

It is possible to change the scanning sequence from rising channel numbers 1-2-3-4- etc to lower channel numbers 40-39-38-37 etc.

- Press simply **DWN or UP** during scanning.

### SCAN on MEMO Channels

- go to the **MEMO** mode by pressing **MEMO**.
- press **SCAN** – the scanner now works only on the 5 memory channels.
- use **UP / DWN** to change the direction of scanning, if necessary

### Dual Watch

Your radio can check two channels subsequently for activity.

If you want to monitor for example a special important „house“ or „priority“ channel, but at the same time you want to listen to other channels of your choice, you can program the more important channel as your “first channel” and use the Dual Watch (**DW**) function:

- select first channel
- press **DW**
- **DW** appears
- select second channel
- Radio checks now both channels one after the other
- stop DW: press **DW**, **DW** disappears

The second channel can be changed any time during DW operation.

## Transmit and correct Microphone use

For transmitting you use the **Push-To-Talk, PTT** key on the left cabinet side

- press **PTT** to transmit  
display shows **TX**
- release button after talking- radio will switch back to reception mode.

Speaking into the built-in microphone: Use a distance of 5-10 cm and speak with moderate voice (do not cry!) The modulation amplifier is sensitive enough and allows some variation of speech volume and distances. An automatic ALC circuit keeps the modulation volume constant and your distant party can hear you always with nearly the same volume. It is recommended to test the best microphone distance and speech loudness with the distant party.

## Power Switching (Power Saving)

4 Watt carrier power in FM is a big load for the battery. In most cases the maximum power of 4 watt in FM is not really needed. You should reduce the transmit power from 4 watts to approx. 1 Watt wherever it is possible.

- Press **H/L** and the Display will show **LOW**. The FM power will now be around 1 Watt (AM power remains always on 1 Watt by regulation)
- Press **H/L** once more and **LOW** will disappear. The FM power will now be back to 4 Watts

## Display Backlight

Use the **LGT** button to illuminate the display.

- Press 1 x = Light on
- Press 1 x = Light off

Light on means extra power consumption from battery!

## External Connectors

### External Speaker/ Earphone SPK

Depending on surrounding noise it can be useful to connect a speaker-mic or headset to the radio. Speakers can have 8-16 Ohms, Earphones should have 32 Ohms or more. The socket is designed for a 3.5 mm Standard Mono plug.

The output power for speakers is approx. 0.5 watts at 16 Ohms and is sufficient for small speakers or speaker-mic-combinations.

To avoid acoustical shocks when using headsets or earphones, please take care that no low impedance earphones (4-16 Ohms) are allowed to be connected there! Such earphones can produce too loud sound volume for your ears.

Today headsets have impedances of 32 Ohms or more. Such headsets do not provide too much acoustical power to the ears and can be used without problems. All ALAN and ALBRECHT speaker mics have such earphones.

There is common ground connection together with the mic socket, the maximum allowed cable length may be up to 3 metres.

### **Microphone socket MIC**

The 2.5 mm- mic socket is wired according to the well known amateur - radio standard with PTT key in series with the microphone. Most hand held radios use this standard wiring.

Maximum allowed cable length is 3 m.

The microphone socket has been tested and is suitable for nearly all kind of microphones, even those with amplifiers or selective calling devices. According to the latest regulations you are also allowed to plug in data modems or connecting cables to PC sound cards to enable data transmission or audio gateway functions via internet. However, this type of data transfer is only permitted on certain channels, not in all countries and only for non-commercial use.

### **European warranty information**

The distributor, dealer or retail shop where You bought the radio warrants to the original retail purchaser of this product that should this product or any part of it, under normal use and conditions, be proven defective in material or workmanship within 2 years from the date of original purchase, such defect(s) will be repaired or replaced with new or reconditioned product without charge for parts and repair labor. To obtain repair or replacement within the terms of this warranty, the product is to be delivered with proof of warranty coverage (e.g. a copy of Your bill of sale), specification of defect(s), to the distributor, dealer or his authorised repair centre.

Liability for communications range of this product is disclaimed. The warranty does not apply to any product or part there of which, has suffered or been damaged through alteration, improper installation, mishandling, misuse, neglect, accident, or by removal or defacement of the factory serial number label(s). The warranty does not apply to accessory parts or problems caused through not authorized or not recommended accessories like other than the supplied microphone, external antennas, external power supplies and over voltage caused through external power supplies, wrong chargers, wrong battery types, lightning or over voltage defects via antenna or other cables, broken or damaged acrylic glass windows and cabinet parts.

Please contact the dealer or person where You have purchased Your CB radio.

### **Where to find service hints and service documentation**

The complete technical documentation is updated regularly. You can download the latest versions of user manuals, technical documents and conformity declaration, as well as service hints or FAQ's any time from our server under

**<http://www.hobbyradio.de> or  
[www.alan-albrecht.info](http://www.alan-albrecht.info)**

If You should have a problem, please have a look to the service hints or frequently asked questions (FAQ) before You send Your CB radio back to the service centre.

## Recycling and Disposal of Electronics Items

The new WEEE and ROHS directives regulate environmentally compatible production methods and the recycling of no more used electronics items. It is no more allowed to place no more used electronic items into the normal household trash. The industry has provided recycling systems and the local authorities provide free of charge collecting stations for electronic waste. Please contribute to the environment protection and use these local collecting stations, if You should one day no more use your radio. The crossed trash bin symbol on the radio shall remember you!



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Service- Fax:	06103 - 948160
Repairs and Spare Parts	06103 - 948122
e-mail:	service@alan-electronics.de

Homepage:	<a href="http://www.alan-electronics.de">www.alan-electronics.de</a> , <a href="http://www.albrecht-online.de">www.albrecht-online.de</a>
Service-Download	<a href="http://www.hobbyradio.de">www.hobbyradio.de</a> , <a href="http://www.alan-albrecht.info">www.alan-albrecht.info</a>

## Short Form Manual AE 2980

### The most important Functions

**Batteries:** insert 9 pcs Mignon Type (=AA) heavy duty Alkaline Batteries or NiMH rechargeable batteries into battery compartment. Open battery compartment on top side by thumbnail or coin. Observe polarity markings. Charging only with optional wall charger 230 V or with separate external charger-

**12 V cable** 12 V or 24 V adapters (option) can only be used for operating, not for charging.

**Country Programming (with pressed PTT button during Power ON switching or at first use)**

**80/12** Germany, Czech Republic (use only FM), Slovak Republic (use only FM on channels 1–40 and 70-80)

**With pressed PTT and D-EU-Buttons during power on**

**40/40** Belgium, Bulgaria, Germany, Estland, Finland, France, Greece, Italy, Latvia, Liechtenstein, Netherlands, Poland, Portugal, Romania, Switzerland, Spain

Please observe the different CB regulations and rules in the country of operation (see Radio Passport!)

### Functions for Standard Use

<b>VOL</b>	Volume and Power on/off (counterclockwise = minimum volume and off)
<b>SQ</b>	<b>Squelch</b> to suppress weak signals and interference. Counterclockwise = open, clockwise less sensitive
<b>A / FM</b>	Modulation, select between AM or FM
<b>Channel UP / DWN</b>	Select your desired radio channel
<b>Mic</b>	Press PTT to transmit and release to receive. Optimum distance: some cm.
<b>MEMO</b>	5 frequently used channels (factory setting: 1, 4, 9, 19, 40 ) – short push <b>MEMO</b> , then select Memo location <b>1- 5</b>
<b>Program Memory</b>	Select channel -- press <b>MEMO</b> 2 sec -- select location number <b>1-5</b> -- press <b>MEMO</b> shortly
<b>SCAN</b>	Busy channel scanning on /off: press <b>SCAN</b> – button shortly
<b>Dual Watch DW</b>	select first channel -- press <b>DW</b> -- <b>DW</b> appears -- select second channel Radio checks now both channels one after the other Stop DW: press <b>DW</b> , <b>DW</b> disappears
<b>H/L</b>	Transmit power switch for FM to save battery power. In <b>LOW</b> position The transmit power will reduce to appr. 1 Watt.

## Declaration of Conformity / Konformitätserklärung



We hereby declare that our product: / Wir erklären hiermit, dass unser Produkt

### CB-Radio Albrecht AE 2980

satisfies all technical regulations applicable to the product within the scope of EU Council Directives, European Standards and national frequency applications: / alle technischen Anforderungen im Geltungsbereich der EU Richtlinien, europäischer Normen und nationaler Frequenzanwendungen einhält:

**73/23/EEC, 89/336/EEC, 2004/108/EG and 99/5/EC**  
**EN 300 135 -2 V.1.2.1 / EN 300 433-2 V.1.1.2**  
**EN 301 489-1 V.1.1.6, EN 301 489-13 V.1.2.1, EN 60 950-1: 2006**

All essential radio test suites have been carried out. /  
Alle für das Produkt vorgeschriebenen Funktestreihen wurden durchgeführt.

**Alan Electronics GmbH**  
**Daimlerstr. 1 k**  
**D- 63303 Dreieich**

This declaration is issued under our sole responsibility. Basing on not harmonised frequency applications, the CB radio may be used only in listed countries according to selected channel programming. An individual licence for operating this radio in **AM + FM** on 40/40 in **B, CH, E** and **I** is requested.

In **D**, where 80/12, 80/40, 40/12 or 40/40 FM/AM channels are allowed, **CZ** (only 80 FM), **SK** (only FM 40 and 70-80) **BG, EST, F, FIN, GR, IRL, LV, NL, PL, P, RO** the operation on 40 / 40 channels in AM and FM is free of licence and free of charges. **This radio is not allowed in Austria, where radios with country switches are generally not allowed to be used.**

Residents of Belgium, Spain, Switzerland and Italy need a CB license in their home country, while travellers from other European countries may use their radio during travelling in these countries free of license and charges.

Diese Erklärung wird unter unserer alleinigen Verantwortung abgegeben. Dieses Funkgerät darf wegen der nicht harmonisierten Frequenzanwendungen in **AM + FM** in den Ländern **B, CH, E** und **I** nur mit gültiger CB **Funkgenehmigung** benutzt werden. In **D** (80 FM, max 40 AM), **CZ** (nur 80 FM), **SK** (nur 40 FM + Kanäle 70-80), **BG, EST, F, FIN, GR, IRL, LV, NL, P, PL** und **RO** (40/40) ist der CB Funk anmelde- und gebührenfrei. Dabei ist in Deutschland ist mit der Programmierung **80/12 der ortsfeste** Sendebetrieb auf den Kanälen 41 - 80 in bestimmten Regionen entlang der Grenzen der Bundesrepublik Deutschland (außer zu CZ) nicht oder nur mit Sondergenehmigung gestattet.

Bewohner von Belgien, der Schweiz, Liechtenstein, Italien und Spanien benötigen in ihrem Heimatland eine Genehmigung (CB-Lizenz). Die vorübergehende Benutzung durch Reisende aus anderen europäischen Ländern ist jedoch in diesen Ländern anmelde- und gebührenfrei erlaubt. Mitführen der Circulation Card für Reisende aus Deutschland ist empfohlen in Spanien, Finnland, der Schweiz und Liechtenstein.

**Alan Electronics GmbH declare, bajo su responsabilidad, que este aparato cumple con lo dispuesto en la Directiva 99/05/CE, del Parlamento Europeo y del Consejo de 9 de marzo de 1999, transpuesta a la legislación española mediante el Real Decreto 1890/2000, de 20 de noviembre.**

Point of contact/Ansprechpartner: **Dipl.-Phys. Wolfgang Schnorrenberg**

Place and date of issue:

**Dreieich/ Lütjensee, 7.1.2009**

**(Signature)**

Dipl.-Phys. Wolfgang Schnorrenberg  
Alan Electronics GmbH

## Albrecht Radio Passport

The following **programming** and **operation** rules are valid for your **AE 2980** (as of January 2009) in the countries, which apply the R&TTE Directive:

Country	Programming	License and Charges
<b>Operating with licence/charges or restrictions</b>		
Austria	40 FM	Radios with country switches are not allowed to be used in Austria. For use in Austria we offer a limited version AE 2980 FM on request
Belgium	40/40	License and charges for residents
Italy	40/40	License and charges for residents
Switzerland, Liechtenstein	40/40	License and charges for residents
Spain	40/40	License and charges for residents
<b>Operating without license/ charges and without any restrictions</b>		
Belgium	40/40	Free use for travellers from other countries. Home license or Circulation Card is accepted.
Bulgaria	40/40	Free of license and charges for all users
Czech Republic	80/12 setting, but no AM	Free of license and charges for all users
Germany	80/12, 40/40	Free of license and charges for all users, except base station use on CH 4-80 in certain border areas
Estonia	40/40	Free of license and charges for all users
Finland	40/40	Free of license and charges for all users
France	40/40	Free of license and charges for all users
Greece	40/40	Free of license and charges for all users
Ireland	40/40	Free of license and charges for all users
Italy	40/40	Free of license and charges for travellers
Latvia	40/40	Free of license and charges for all users
Netherlands	40/40	Free of license and charges for all users
Poland	40/40	Free of license and charges for all users
Portugal	40/40	Free of license and charges for all users
Romania	40/40	Free of license and charges for all users
Switzerland and Liechtenstein	40/40	Free of license and charges for travellers, Circulation Card is recommended
Slovak Republic	80/12 setting, but no AM, and FM only on 1-40 and 70-80	Free of license and charges for all users
Spain	40/40	Free of license and charges for travellers, Circulation Card is recommended